

BERDYANSKIY, B.M., inzh.

Self-sharpening knives of rotary cutters. Trakt. i sel'khozmash. no.6:
30-31 Je '65. (MIRA 18:7)

1. Rostovskiy nauchno-issledovatel'skiy institut tekhnologii
mashinostroyeniya.

BERDYANSKAYA, M.G., inshener; PUSHKARENKO, N.D., inshener.

Painting agricultural machinery with preheated paint. Sel'khozmashina
no.4:26-27 Ap '54. (MILIA 7:5)
(Painting, Industrial)

CHEKMAREV, A.P.; VATKIN, Ya.L., dotsent; HERDYANSKIY, M.G., inzhener;
LUDENSKIY, I.M., inzhener; SLESARCHIK, V.D., inzhener.

Reducing longitudinal differences in the walls of pipes made on
automatic mills. Stal' 15 no.1:58-62 Ja '55. (MLRA 8:5)

1. Deystvitel'nyy chlen Akademii nauk USSR (for Chekmarev).
2. Dnepropetrovskiy metallurgicheskiy institut i Truboproykatnyy
zavod im. Lenina.
(Pipes, Steel) (Rolling-mill machinery)

AUTHOR: Berdyanetsky, M.G.

SOV/133-58-10-20/31

TITLE: Mechanisation and Automation of Tube Production
(Mekhanizatsiya i avtomatizatsiya trubnogo proizvodstva)

PERIODICAL: *Stal'*, 1958, Nr 10, pp 928 - 930 (USSR)

ABSTRACT: A brief review of the work carried out by TsIAM. The laboratory was specially organised on the Lenin Works to assist in the automatization of tube-manufacturing processes in the Dnepropetrovsk economic and administrative region. The following are mentioned: 1) scheme of an experimental mechanism for turning semis in a roller heating furnace (Figure 1); 2) a scheme for automatic marking of tubes (Figure 2); 3) a forging machine for closing tube ends before drawing (Figure 3); 4) modernisation of various mechanisms before a continuous mill at the Lenin Works; 5) means of automation of an installation for detecting defective tubes (based on ultrasonics) and for measuring finished tubes.

Card 1/2

SOV/133-58-10-20/31

Mechanisation and Automatization of Tube Production

There are 3 figures and 2 Soviet references.

ASSOCIATION: TsLAM pri zavode im. Lenina. (TsLAM at the Works
imeni Lenin)

Card 2/2

S/130/60/000/011/009/011
A006/A001

AUTHORS: Berdianskiy, M. G., Brodskiy, I. I., Veynov, V. P., Gnilenko, B. A.,
Grinval'd, V. A., Kryukov, G. Ya.

TITLE: Mechanization and Automation of a Core-Extractor of a Continuous
Pipe Rolling Mill

PERIODICAL: Metallurg, 1960, No. 11, pp. 30-33

TEXT: Information is given on the mechanized and automated operation of a core-extractor of a continuous pipe-rolling mill including the following components: a rest (Fig. 2); an automatic trolley (Fig. 3); a core-dropping machine (Fig. 4) a pipe-extractor (Fig. 5) and a pipe-dropping machine (Fig. 6). The pipes with the cores are supplied to the rest whose jaws retain the pipes during the extraction of the cores. The opening of the jaws allows the passage of the cores only. The jaws are exchangeable depending on the diameter of the core. One or two cores may be extracted. The simultaneous extraction of two cores is performed with the aid of the automatic trolley. Two tongs with jaws are opened when contacting the cores allowing the passage of the core heads which fall upon the pawl tail and disconnect it from the protuberance on the traction hook nob.

Card 1/7

S/130/60/000/011/009/011
A006/A001

Mechanization and Automation of a Core-Extractor of a Continuous Pipe Rolling Mill

A spring puts the lever underneath the pawl to prevent its clutching with the aforementioned protuberance during extraction. Under the effect of its proper weight the hook is switched on. The tongs, brought together by a spring, clamp the core head and extraction is started. After completed extraction the tongs are opened and the core released. The trolley moves back to the rest. The cores are removed and rolled down into a cooling bath. After removal of the mandrels, the pipes are extracted from the rest and dropped into a housing. The information includes the detailed description of the automatic control system.

Card 2/7

S/130/60/000/U14, C03/011
AC06/A001

Mechanization and Automation of a Core-Extractor of a Continuous Pipe Rolling Mill

Figure 2. Rest

1 - jaws; 2 - counterweight; 3 - cams;
4 - shafts.

Figure 3. Automatic trolley

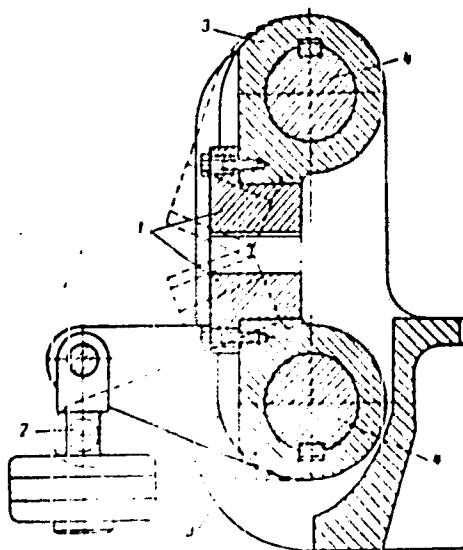
1 - tongs; 2 - jaws; 3 - pawl; 4 - traction hook;
5 - lever; 6 - springs;
7 - roller; 8 - roller of the dented section;
9 - rod; 10 - stem; 11 - hinge.

Figure 4. Core dropping device

1 - pneumatic cylinder; 2 - vertical cylinder;
3 and 5 - levers; 4 - stem.

Figure 5. Machine to extract the pipes from the rest

1 - pneumatic cylinder; 2 - flag.

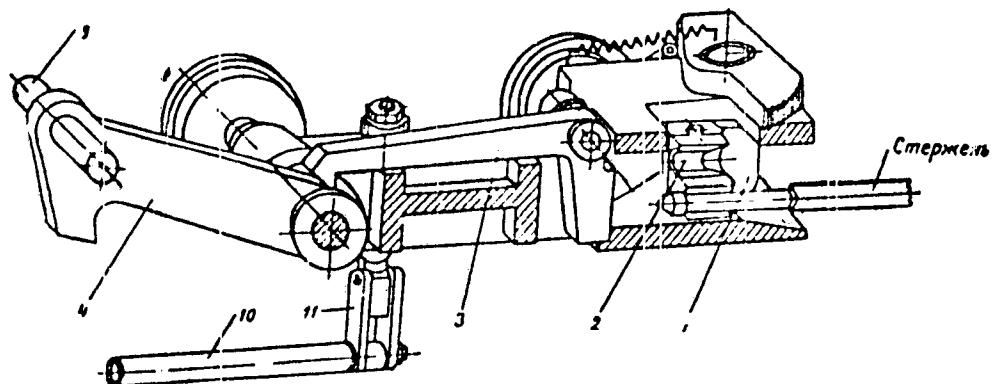


Card 3/7

6/130/60/000/011/009/011
A006/A001

Mechanization and Automation of a Core-Extractor of a Continuous Pipe Rolling Mill

Figure 3:

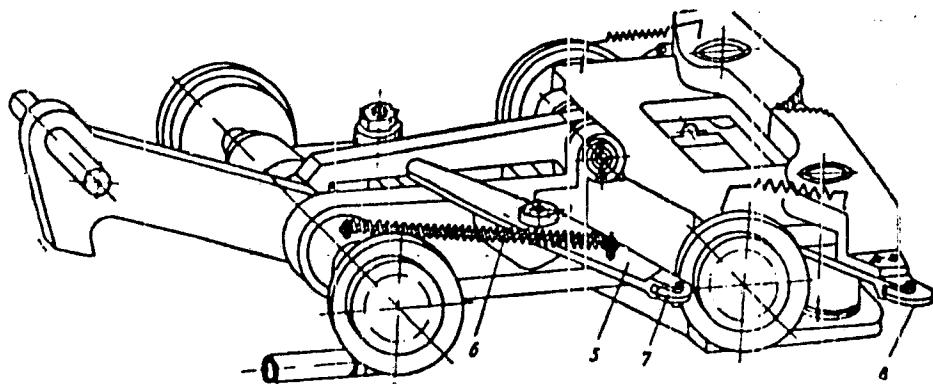


Card 4/7

8/130/50/000/011/009/011
A006/A001

Mechanization and Automation of a Core-Extractor of a Continuous Pipe Rolling Mill

Figure 3:



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S/130/60/000/011/009/011
A006/A001

Mechanization and Automation of a Core-Extractor of a Continuous Pipe Rolling Mill

Figure 4:

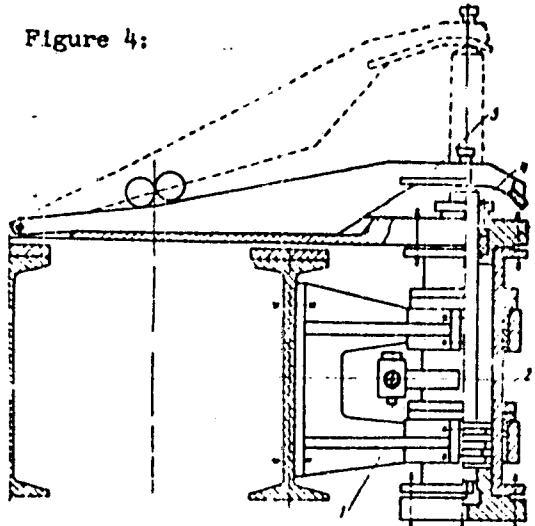
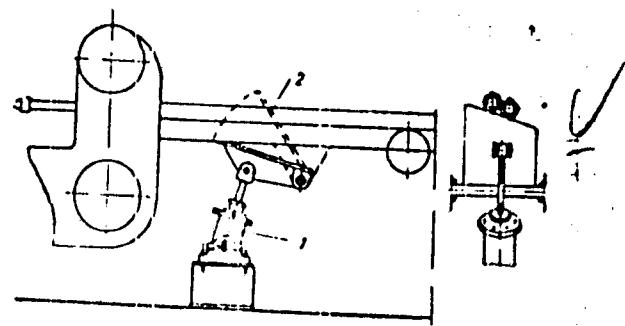


Figure 5:



Card 6/7

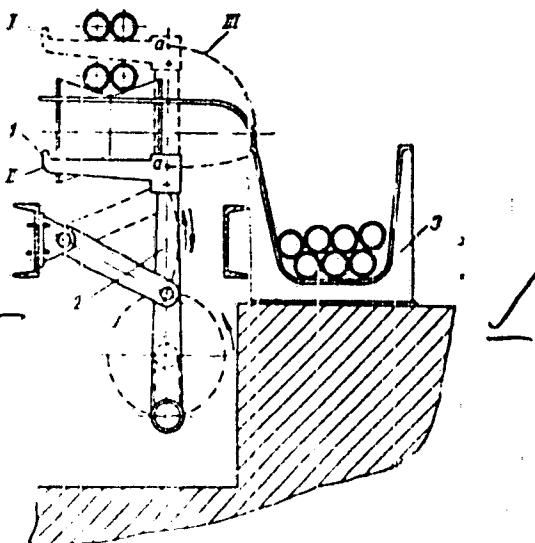
S/130/6C/000/011/005/011
A006/AOC1

Mechanization and Automation of a Core-Extractor of a Continuous Pipe Rolling Mill

Figure 6. Pipe dropping machine

1 - lever; 2 - connecting rod;
3 - housing; I and II - corresponding upper and lower position of the dropping lever; III - trajectory of point "a" during operation of the device.
There are 6 figures.

ASSOCIATION: Truboprotkatnyy zavod im.
V. I. Lenin (Pipe rolling
Plant imeni V. I. Lenin)



Card 7/7

BERDYANSKIY, M.G., inzh.; BRODSKIY, I.I., inzh.; KRYUKOV, G.Ya., inzh.;
SLYUSAREV, A.N., inzh.

Automatic marking of hot pipes. Mekhanicheskaya avtomatika i proizvodstvo, 15 no.11:
15-18 N '61. (MIRA 14:11)
(Marking devices) (Automatic control)

3/133/62/000/001/007/010
A054/A:27

AUTHORS: Berdianskiy, M. G., Brodskiy, I. I., Burakovskiy, V. N., Grinval'd,
V. A., Dol'nik, T. I., Sidorenko, V. M., Engineers

TITLE: Friction-type tube pushing and turning device on the automatic tube
rolling mill

PERIODICAL: Stal', no. 1, 1962, 60 - 61

TEXT: To replace the cranky pneumatic drive of the "140" automatic tube
rolling mill of the zavod im. Lenina (Plant im. Lenin) by a member more suitable
for the automatic process, a new pushing and turning device has been developed
at the Tsentral'naya laboratoriya automatizatsii i mekhanizatsii Dnepropetrovskogo
sovnarkhoza (Central Laboratory of Automation and Mechanization of the Dnepro-
petrovsk Sovnarkhoz) in cooperation with V. F. Veyevnik, Engineer, L. P. Kandyba,
Engineer, I. P. Ivanov, Engineer, Ye. B. Byutner, Engineer, L. I. Vitnov, Tech-
nician. The new device, which consists of friction rollers, is mounted on the
front table of the mill, at 4,850 mm distance from the roll axis. The mechanism
pushes the tube onto the stand and turns it through 90° before the second pass.
The pusher is controlled from the mill switchboard. The friction rollers are in

Card 1/2

Friction-type tube pushing and...

S/133/62/000/001/007/010
A054/A127

constant rotation and the distance between them is regulated by the operator via an electro-pneumatic distributor. The head part of the tube is gripped by the friction rollers when it slides down on the inclined frame and is pushed by them into the stand. The rolls then return into their initial position. When the first pass has been completed, the reversing rollers move the tube on to the front table. This time the friction rollers grip the tube, lift it and turn it over, at the same time feeding it into the stand. The new device cuts down the feed time of tube blanks (105 mm in diameter and 900 - 1,050 mm long) from 1.1 to 0.67 sec, while turning over and pushing in the tube for the second pass takes 0.9 sec. The rolling cycle was cut by 1.33 sec with the friction type feeding device. Differences in wall-thickness (longitudinal and across) of the tubes could also be eliminated, because the new pusher ensures an accurate positioning in vertical direction of the tube edge before the second pass. The mill output has increased by 5%. There are 2 figures.

Card 2/2

VATKIN, Ya. L., kand. tekhn. nauk; BERDYANSKIY, M. G., inzh.;
BRODSKIY, I. I., inzh.; DRUYAN, V. M., inzh.; KOLPOVSKIY, N. M.,
inzh.; KAGARLITSKIY, A. S., inzh.; LUDENSKIY, A. M., inzh.

Fixed mandrels on automatic mills. Nauch. trudy. DMI no.48:
174-135 '62.
(MIRA 15:10)

(Pipe mills)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

SAVKIN, P.V., inzh.; PANYUSHKIN, N.V., inzh.; BERDYANSKIY, M.G., inzh.

Ways of improving the performance of automatic pipe mill
equipment. Stal' 23 no.10:927-928 0 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDIANSKIY, M.G.; CHMIS, V.G.; BRODSKIY, I.I.; VYEVNIK, V.F.; VITNOV,
I.I.; GRINVAL'D, V.A.; TOLDAYEV, A.S.

Automatic machine for screwing unions. Biul. tekhn.-ekon. inform.
Gos. nauch.-issel. inst. nauch. i tekhn. inform. 17 no.12:27-29 D '64.
(MIRA 18:3)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

VATKIN, Ya.L., doktor tekhn. nauk; BERDYANSKIY, M.G., inzh.; BRODSKIY, I.I.,
inzh.; DOL'NIK, T.I., inzh.; KOSTYUCHENKO, V.I., inzh.; TOLDAYEV, A.S.
inzh.

Regulator of the longitudinal wall thickness variation in pipe. Stal'
24 no.9:832-833 S '64. (MIRA 17:10)

1. Dnepropetrovskiy metalurgicheskiy institut i Tsentral'naya
laboratoriya avtomatizatsii i mekhanizatsii Priazhnepravskogo soveta
narodnogo khozyaystva.

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYANSKIY, M.G.; BRODSKIY, I.I.; DONETS, V.V.; VEYEVNIK, V.F.

Mechanism for introducing dry lubrication into the pipe shell
before entering the rolling mill. Metallurg 10 no.6:28-30
Je '65. (MIRA 18:6)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

ACC NR: AP6025579 (N) SOURCE CODE: UR/0413/66/000/013/0009/0010

INVENTOR: Berdyanskiy, M. G.; Burakovskiy, V. N.; Brodskiy, I. I.; Kas'yan, V. Kh.; Pozin, Ya. M.; Savkin, P. V.

ORG: None

TITLE: Multiple-draft mill for drawing pipe on a short mandrel. Class 7, No. 183168 [announced by the Dnepropetrovsk Pipe Rolling Plant imeni Lenin (Dnepropetrovskiy truboprovodnyy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1956, 9-10

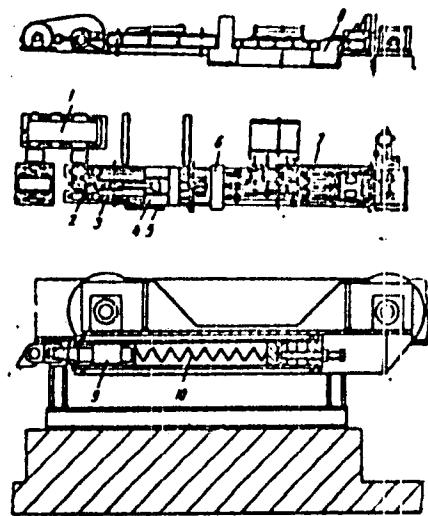
TOPIC TAGS: metal drawing, pipe, reliability

ABSTRACT: This Author's Certificate introduces: 1. A multiple-draft mill for drawing pipe on a short mandrel. The unit consists of a truck with a drive, unloaders, a stand with draw plate, a receiving table with troughs and a unit for setting the rods along with the mandrels into tubes. Operational reliability is improved and servicing is simplified by mounting the rods on a common movable truck and equipping them with spring compensators. 2. A modification of this device equipped with a lever mechanism for each drawing unit for clamping tubes, and a screw arrangement for moving the support.

Cord 1/2

UDC: 621.774.372.002.5

ACC NR: AP6025579



1-main drive; 2-pull chain; 3-working tube; 4-truck; 5-unloader;
6-lubricator; 7-receiving table; 8-stand for rod support
mechanisms; 9-rods; 10-springs

SUB CODE: 13/ SUBM DATE: 21Sep64

Card 2/2

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

~~SHVAB~~ BERDYANSKIY, V.N.

SHVAB, N.I., inzhener; BERDYANSKIY, V.N., inzhener.

Utilization of EM-502 and EM-161 excavators for irrigation and
soil improvement work. Gidr. i mel. 6 no.11:56-61 II '54.

(Excavating machinery)

(MUSA 7:11)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYANSKIY, V. N.

Berdyanskiy, V. N.

"The construction and repair of channels with multi-bucket excavators."
Min Higher Education USSR. Tashkent Inst of Engineers of Irrigation
and Mechanization of Agriculture (TIIIMASKH). Tashkent, 1956.
(Dissertation for the Degree of Candidate in Technical Sciences).

So: Knizhnyaya letopis'
No. 25, 1956. Moscow

BERDYANSKIY, V.N., inzh.

Instrument for registering the net operational time of pumping
and pump dredging apparatus. Mekh.stroi. 14 no.6:17 Je '57.

(MIRA 10:11)

(Pumping machinery) (Dredging machinery)

AUTHOR: Berdymukhamedov, V.H., Engineer SCOV 100-50-5-9/15
Tretyakovskikh, F.S., Engineer

TITLE: Automatic Timing Apparatus for Dragline Excavators.
(Avtomaticheskii vremenii raboty ekskavatorov-draglaynov).

PERIODICAL: Mekhanizatsiya Stroitel'stva, 1958, Nr 5, pp 28-29.

ABSTRACT: The authors of this article designed six types of automatic timing apparatus based on mechanical, hydraulic and electrical principles. The tests carried out with these various timing apparatus connected to a dragline excavator proved the superiority of the one based on the mechanical principle connected with a hydraulic system of operation. Figure 1 illustrates timing apparatus registering the work of the main winch; it is brought into action by a valve mechanization illustrated in Figure 2. The equipment illustrated in Figure 3 controls the fluid in the hydraulic system and is situated in the cabin of the excavator. During starting the timing mechanism E-502 was installed in the excavator. There are three figures.
Card 1/1 1. Construction--Equipment 2. Control systems--Applications

BERDYANSKIY, V.N.; KUPERMAN, E.Sh.; MIRSAGATOV, A.N.

Building subsurface drainage in the Golodnaya Steppe. Gidr.1 mel.
14 no.3:16-22 Mr '62. (MIRA 15.4)

1. Institut vodnykh problem i gidrotekhniki AN UzSSR.
(Golodnaya Steppe—Drainage)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYANSKIY, V.N., inzh.; KUFERMAN, E.Sh., ir.zh.; MIRSAGATOV, A.N., inzh.

Mechanization of the construction of a deep covered drain. Mekh.
stroi. 19 no.7:18-19 Jl '62. (MIRA 15:7)
(Drainage) (Pipe-laying machinery)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYANSKIY, V.N.; KUPERMAN, E.Sh.; MIRSAGATOV, A.N.

Technology of the combined mechanized construction of a closed horizontal drainage in the Golodnaya Steppe. Vop. gidrotekh. no.15:57-68 '63. (MIRA 18:2)

BERDYAYEV, A. F.

Otakaiy Fedorovich

PA 56/49T84

DSR/Medicine - Wounds, Infections
Medicine - Wounds, Therapy

Feb 49

"The Problem of Prophylaxis and Treatment of Infected Complications of Wounds," A. F. Berdyayev, Dr Med Sci, Polyclinic, Min of Transp, 1 p

"Khirurgiya" No 2

In rebuttal to V. L. Yelin's article recommending use of toluidine blue to prevent infections in wounds, author introduces results of long use of a 1% alcohol solution of pyoctanin for same purpose. Dir Polyclinic, Min of Transp: I. G. Belyayev.

56/49T84

BERDYAYEV, A. F.

Treatment of surgical wounds with methyl violet as a method of prevention of suppurations. Khirurgiia, Moskva no.3:75 Mar 1952. (CLM: 22:1)

1. Doctor Medical Sciences A. F. Berdyayev. 2. Of the Central Polyclinic of the Ministry of Ways of Communication,

BERDIAYEV, A.F.

[Diseases and injuries of joints and bones; a short guide] Bolezni i povrezhdeniya sostavov i kostei; kratkes spravuchnee posobie. Moskva, Medgiz, 1956. 242 p. (MLIA 9:4)
(JOINTS--DISEASES) (BONES--DISEASES)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BENDYAYEV, A.P., doktor meditsinskikh nauk (Moskva)

My method of removing callusities. Yel'tsi, i skush. 21. no.11:44 N 156.
(CALLOSITIES)
(MIRA 9:12)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYAYEV, A.F.

BERDYAYEV, A.F. (Moskva)

Diagnosis of appendicitis. Vel'd. i akush. 22 no.11:11-15 8 '57.
(APPENDICITIS) (MIRA 11:2)

BERDYAYEV, Yo. G.: Master Tech Sci (diss) -- "Precision navigation of ships
and hydrographic provisions for it". Leningrad, 1958. 19 pp (Leningrad Higher
Engineering Maritime School im S. O. Makarov) (KL, No 7, 1959, 102)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

SEMELEV, Yu.N.; SHMAKOV, G.S.; HERDYAYEVA, T.N.

Rolling cobalt powder into strip. Trudy LPI no.222:68-70 '63.
(MIRA 16:7)

(Powder metallurgy) (Rolling (Metalwork))

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYBAEV, R.; BAYDEL'DINOV, M.

A valuable contribution to the treasure chest of Kazakh literature. Vest. AN Kazakh. SSR 18 no.6:77-82 Je '62,
(MIRA 15:9)
(Ferdowsi) (Persian literature--Translations into Kazakh)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

Y
P. L. M. Y., U. S.

44° 1. 11. DHELM, U. S. K. V. Venkatesh Dermatitis Herpetiformis Indring.
Jdr. v. Khurja, K. P. Chetana, 1947, No. 7, p. 243.

S: Latent Dermatograph. Statex, Vol. 7, 1949

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

PERDIBAYEV, U. B. and MULAGULOVA, G. A.

Perdybayev, U. B. and Mulagulova, G. A. "A case of domestic mange", Zdravookhraneniye Kazakhstana, 1949, No. 2, p. 30-32.

SO: U-4630, 16 Sept. 53, (Letopis 'Zurnal 'nykh Statей, No. 23, 1949).

MEHDYBATOV, U.B.

Oulture of pathogenic factors of dermatomycoses in Kazakhstan. Vest.
vener., Moskva No.1:52 Jan-Feb 52. (CIML 21:4)

1. Of the Institute of Regional Pathology and of the Academy of Sciences
Kazakh SSR.

BIRDYBAYEV, U.B.

Urgent problems in prophylaxis of fungus diseases in Kazakhstan. Vest. AM
Kazakh. SSR 10 no.10:85-89 0 '53. (MLRA 6:11)

(Kazakhstan--Dermatomycosis)

(Dermatomycosis--Kazakhstan)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYBAYEV, U. B.

BERDYBAYEV, U. B. -- "Fungus Diseases in Kazakhstan and Ways of Eliminating Them."
Min Public Health USSR, Central Inst for the Advanced Training of Physicians,
Moscow, 1955 (Dissertation for the Degree of Doctor of Medical Sciences)

SO: Knizhnaya letopis', No. 37, 3 September 1955

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

Name: BERDYBAYEV, Ungerbay Berdybayevich

Dissertation: Fungous Diseases in Kazakhstan and
Means for their Elimination

Degree: Doc Med Sci

Affiliation: Kazakh Sci Res Skin and Venero-
logical Inst

Defense Date, Place: 25 Oct 55, Council of the Central Inst
for Advanced Training of Physicians

Certification Date: 7 Jul 56

Source: BMVO 5/57

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYRAIEV, U.B., prof.

Results of the work of the dermatology and venereology section.
Zdrav. Kazakh. 17 no.4/5 '57. (MIRA 12:6)
(KAZAKHSTAN--VENEREAJ. DISEASES) (KAZAKHSTAN--SKIN--DISEASES)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYBAYEV, Umarbek Basibekovich, prof., doktor med.nauk; LEVANOV, Yu.,
red.; OYSTRAKH, V., tekhn.red.

[Mycotic diseases in Kazakhstan] Gribkovye zabolевания в Казах-
стане. Alma-Ata, Kazakhskoe gos.isd.-vo, 1959. 238 p.
(MIRA 14:3)

1. Institut krayevoy patologii AM KazSSR (for Berdybayev).
(KAZAKHSTAN--MEDICAL MYCOLOGY)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYBAYEV, U.B.; OMAROV, M.O. (Alma-Ata)

40 years of dermatology and venereology in Kazakhstan. Vest.derm.
i ven. no.9:80-83 '61. (MIRA 15:5)
(KAZAKHSTAN---DERMATOLOGY) (VENERELOGY)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BE.DYBAYEV, U.S.

Fighting venereal diseases and infectious skin diseases in Kazakhstan.
Zdrav. Knzakh. 21 no.6:9-12 '61. (MIRA 15:2)
(KAZAKHSTAN_VENEREAL DISEASES) (KAZAKHSTAN_DERMATOLOGY)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

GORINA, K.D.; BERDYBAYEV, U.B.; GOLKOVA, Ye.I.; PARKHOMENKO, V.A.

Cutaneous leishmaniasis in the city of Alma-Ata. Zdrav. Kazakh. 22
no.2:47-49 '62. (MIRA 15:4)

J. Iz kafedry kozhno-venericheskikh bolezney Kazakhskogo meditsinskogo
Instituta, sanepidstantsii i kozhno-venerologicheskogo dispensera
g. Alma-Aty.
(ALMA-ATA—LEISHMANIASIS)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYBAYEV, U.F.; OMAPOV, M.O.

Pressing problems in dermatovenereology in Kazakhstan. Zdrav.
Kazakh. 22 no.6:3-5 '62. (MIRA 15:11)
(KAZAKHSTAN--DERMATOLOGY)(KAZAKHSTAN--VENEROLOGY)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYBAYEV, U.B.; GORINA, K.D.

Concentrated sunlight in the treatment of some dermatoses.
Zdrav.Kazakh. 22 no.11:47-50 '62. (MIRA 16:2)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof.
U.B. Berdybayev) Kazakhskogo meditsinskogo instituta.
(SOLAR RADIATION--PHYSIOLOGICAL EFFECT)
(SKIN--DISEASES)

БЕРДЫБАЕВ, У.Р.; ГУРИНА, К.Д.

Impulse solar light from Bakirzon's reflector in the treatment
of some dermatoses. Vest. derm. i venuz. 37 no. 4:43-46. 1963.
(115A 175)

и. Кафедра кожно-венерических болезней Казахстанского медицин-
ского института (зав. - проф. У.Р. Бердыбайев).

BERDYCH, Josef

Promoting the movement "Everyone an innovator". Nova technika no.5:
216 '60.

(Industrial management)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYCH, Josef

Membership of enterprises in the Czechoslovak Scientific
Technical Society. Nova technika no.6:278 '60.

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYCH, Josef

Organization of special groups of the Section for Woodworking
Industries of the Czechoslovak Scientific Technical Society.
Drevo 17 no.3:89-90 Mr '62.

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDICKH, Josef'

Program of activities of the Central Committee of the Section for
Woodworking Industry for 1963. Drevno 18 no. 2; 73-74 F '63.

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYCHOVA, J.

Role of the teacher in controlling faulty posture in children. Acta
chir. orthop. trauma. Czech. 29 no.1:29-30 F '62.

1. Institut telesne vychovy sportu KU v Praze.

(POSTURE in inf & child)

CONFIDENTIAL
C. *W. L. Kesten*
With a critical
temperature of
about 240° C., the
material becomes
more brittle
than the E.
sample above
the crit. temp.
waves, but is
of the soft.

CONFIDENTIAL
C. *W. L. Kesten*
With a critical
temperature of
about 240° C., the
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more brittle
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the crit. temp.
waves, but is
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With a critical
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sample above
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waves, but is
of the soft.

CZ/4-60-3-39/44

AUTHORS: Berdych, Josef; Bubal, J.

TITLE: Scientific-Technical Societies.

PERIODICAL: Nová Technika, 1960, No. 3, pp. 141 - 143

ABSTRACT: I. Various plant branches of the Čs. VTS do not make proper use of the "Technicko-ekonomické informace - TEI" (Technical-Economic Information). As an example for the correct utilization the author quotes the plant branch of the Presné strojírny ZVIL Plzeň (Precision Mechanical Engineering Plants ZVIL Plzeň) at Plzeň; the technical and informational literature was distributed among the members of the Čs.VTS. The Technical Committee at the Kovochuté Bridličná (Bridličná) Metallurgical Plants published the technical information as pamphlets. The "Zpravodaje pro TEI" (Reports for the TEI) contain data on new technical literature and information, innovations, improvements, documentation etc.. Such reports have been prepared by the Stalinový závody (Stalin Works) at Záluží v Krušných horách. In the n.p. Silon (Silon, People's Enterprise) in Planá nad Lužnicí the plant branch of the Čs.VTS published the "Technické aktuality" (Technical Actualities). II. The plant branch of the Čs.VTS at the Precision Mechanical Engineering Plants ZVIL Plzeň has been established on March 27, 1959; it has three branch groups, i.e. for rail cars, for machine tools, and for

Card 1/2

Scientific-Technical Societies.

CZ/4-60-3-39/44

cogwheels. The cooperation with the ZV (Plant Committee) of the ROH is close and various teams were established to solve technical and production problems. Lectures were given on the "Electrification of Railroads", "Technology of the Production of Electric Locomotives", etc. A Five-Point Program was prepared containing directives for improvement. III. The members of the plant branch of Čs.VTS at the Hranická cementárna (Cement Works at Hranice), which was established on July 30, 1959, solved the problems of dust separation at the plant and at the cement kiln No. 2. Additional problems of dust exhaustion should be solved at the rotary kilns, the cement mills etc. IV. The plant branch at the Výzkumný ústav lýkových vláken (Research Institute for Bast Fibers) at Šumperk was founded in May 1959. The members of the Cs. VTS assist in the work of the Rationalization Committee, they submitted various improvement suggestions etc. The cooperation with the Hedva Plant in Zábréh secured the solution of a series of problems; among others new technological methods for the processing and testing of bast fibers were found, and proposals were submitted on the automation and mechanization of production and on the protection of fibers. V. A Section for Wood Industry of the Čs.VTS will be established, dealing with questions of woodworking, impregnation of wood, packaging etc.

Card 2/2

CZ/4-60.5-10/35

AUTHOR: Berdych, Josef

TITLE: Full Assistance to the Movement "Everybody an Innovator"

PERIODICAL: Nová Technika, 1960, No. 5, p. 216

TEXT: The author deals with the Socialistic competition "Každý novátorský" (Everybody an Innovator) and the aid granted to this movement by the Strojírenská sekce Čs.VTS (Mechanical Engineering Section of Čs.) in accordance with a decision of the Presidency of the ÚR Čs.VTS (Central Council of Čs.VTS). The author reviews the competitive method applied at the ZPCHS Plant in Pardubice and underlines the significance of the plant's periodical and of lectures on new production methods. 750,000 Kčs could be saved by complex teams. The Mitrofanov operation method will be introduced and the cooperation with the ZŠP (Plant School of Work) improved. In the area of Brno a Technical and Economic Conference was held in January 1960 at the Elektrotechnický závod Julia Fučíka (Julius Fučík Electrotechnical Plants), dealing with problems of competition and new processing methods, like high-frequency feeding, diagonal and oblong duplication by means of lathes etc. At the Adamovské strojírny (Adamov Mechanical Engineering Plants), 87 new methods have been tried and a pamphlet published, describing 15 new machining methods. At the ZKL Plant at Líšeň 290 employees joined the movement "Everybody an Innovator".

Card 1/1

BERD'YEV, Kh. B., POKROVSKIY, S.N. Prof., LEYZERMAN, L. I. Cand of Med Sci, MITARNOVSKIY, V.M
Cand of Med Sci., REMENNIKOVA, V. M. Cand of Med Sci, KASHIMOV, A. A. §

"Plans for liquidating malaria during the Five-Year Plan" a paper read at the
All-Union Conference for Combating Parasitic Diseases held in Moscow, 10-11
Apr 1956

Sum 1239

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYCAN,A.

Experience in operating electric beacons in the Moscow Sea.
Rech. transp. 14 no.4:14 Ap '55. (MLRA 8:6)
(Moscow Sea--Beacons)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYGAN, K.

Third plenum of the managing board of the All-Union Stomatological Society and the First Stomatological Conference of the Georgian S.S.R. Zdrav. Bel. '7 no. 2:71-72 F '61. (MIRA 14:2)
(STOMATOLOGY—CONGRESSES)

BERDYGAN, K.I.

[Actinomycosis of the face, jaws, and neck with modern methods of cure.] Aktinemikoz litsa, chelyustei i shcheli sovremennoye metody lecheniya. Minsk, Gos. izd-vo BSSR, 1955. 128 p. (MIRA 9:5)
(ACTINOMYCOSIS)

BERDYGAN, K. I. Doc Med Sci -- (diss) "Combined methods of treating actinomycosis of the maxillofacial region and the neck, and their [redacted] eventual results." Len, 1958. 22 pp (Len State Order of Lenin Inst for the Advances Training of Physicians im S. M. Kirov), 200 copies (KL, 52-53, 105)

-497-

BERDYGAN, K.I.

Radical methods of treatment of adamantinomas and its late results.
Zdrav. Belor. 5 no.11:19-22 N '59. - (MIRA 13:3)

1. Iz stomatologicheskoy kliniki na base 3-y klinicheskoy bol'nitsy
(glavnnyy vrach A.I. Korkhot). Zaveduyushchiy kursom stomatologii Belo-
russkogo instituta usovershenstvovaniya vrachey.
(JAWS--TUMORS)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYGAN, K.I., dotsent

Simplest methods for the anesthesia and extraction of teeth. Zdrav.
Belor. 6 no.4:55-59 Ap '60. (MIRA 14:5)

1. Iz kafedry stomatologii Belorusskogo Instituta uchebshenstvovaniya
vrachey.
(ANESTHESIA IN DENTISTRY)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BERDYGAN, Yu.F.

Treatment of dental caries by filling. Zdrav. Belor. 6 no.9:62-65
S '60. (MIRA 13:9)
(TEETH--DISEASES) (DENTISTRY)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYKEYEV, A.M.

Diagnosis of isolated lymphogranulomatosis of the stomach. Zdrav.
Turk, 7 no.2:25-27 F '63. (MIRA 16:4)

1. Iz dorozhnoy bol'niyu st. Ashkhabad (nachal'nik Ye.A.
Radzivonchik, nauchnyy rukovoditel' - prof. I.V.Korshakov).
(STOMACH--DISEASES) (HOIGKIN'S DISEASES)

BERDYKEIEV, A.M.

Liver abscesses according to data of Ashkhabad hospitals.
Zdrav. Turk. 7 no.4:18-21 Ap'63. (MIR 16:6)

1. Iz kafedry obshchey khirurgii (zav. - prof.N. M. Iachmurodov)
Turkmenskogo gosudarstvennogo meditsinskogo instituta i Turk-
menskoy respublikanskoy klinicheskoy bol'nitsy imeni N.I.Pirogova.
(glavnnyy vrach M.B.Shapiro)
(ASHKHBAD—LIVER—ABSCESS)

BERDYKEYEV, A.M.

Three cases of a carcinoid of the ~~verb~~ form process. Idrav.
Turk, 8 no.1:21 Ja '64. (MIR 17:5)

1. Iz dorozhnoy bol'nitay stantcii Lektsii (pech' Ilik - A.Y.
Morezova).

BERDYKLYCHEV, A.M.

Change in sensory (pain) adaptation in the Chinese method of
acupuncture. Zdrav. Turk. 4 no.5:22-27 S-0 '60. (MIRA 13:12)

1. Iz kafedry nervnykh bolezney (ispolnyayushchiy obyazannosti
zaveduyushchego - L.S. Sultanova) Turkmenetskogo gosudarstvennogo
meditsinskogo instituta imeni I.V. Stalina i Instituta nevrologii
i fizicheskikh metodov lecheniya (nauchnyy rukovoditel' - dotsent
A.N. Shogam).

(ACUPUNCTURE)

(PAIN)

BERDYKILYCHEV, K.

A conference on protective afforestation. Izv. AN Turk. SSR. Ser.
biol. nauk no.5:95-96 '84.

In the Turkmen Geographical Society. Ibid.:96-97

(MIFA 18:2)

1. Institut pustyn' AN Turkmenskoy SSR.

BERDYKLYCHEV, K.

A conference of young scientists. Izv. AN Turk. SSR. Ser. biol.nauk
no.2;92-93 '62. (MIRA 17:4)

1. Institut pustyn' AN Turkmeneskoy SSR.

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

RENDYKLYCHEV, K.; RUDYGINA, V.S.

Effect of trees on the level of ground water. Izv. AN Turk.
SSR, Ser. biol. nauk no.1:72-74 '64. (MIRA 17:9)

A. Institut pustyn' AN Turkmeneskoy SSR.

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYKLYCHEV, K.; YEROSHKOY, N.A.

Tashauz Forestry District and its future activities. Izv. AN Turk.
SSR. Ser. biol. nauk no.6:91-92 '64. (MIRA 18:4)

1. Institut pustyn' AN Turkmenskoy SSR,

BERDYKLYCHEV, Murad; SHCHETININA, Yu.M., red.

[Health resort resources of Turkmenia] Kurortnye bogatstva Turkmenii. Ashkhabad, Turkmenskoe izd-vo,
1964. 168 p. (MIRA 18:11)

1. Chlen-korrespondent AN Turkmeneskoy SSR (for Berdyklychev).

BERDYKLYCHEV, M.G.

[Health resorts of Turkmenistan; a popular study] Kurorty Turkmenistana; nauchno-populiarnyi ocherk. Ashkhabad, Turkmeneskoe gos. izd-vo, 1954. 40 p. (MLRA 10:8)
(TURKMENISTAN--HEALTH RESORTS, WATERING PLACES, ETC.)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BIRD 1A/YC/1/EU/HG

BERDYKLYCHEV, Murad Gapayevich; DOBROVOL'SKIY, Yu.A., prof., red.; ZOTOV,
D.A., red.; VOLYANSKIYA, O.A., tekhn.red.

[Public health in the Turkmen S.S.R.] Ziravookhranenie Turkmenskoi
SSR, Pri uchastii i pod red. Iu.A.Dobrovolskogo. Ashkhabad,
Turkmenskoe gos. izd-vo, 1957. 247 p.
(MIRA 11:3)

1. Chlen-korrespondent Akademii nauk TSSR (for Berdyklychev)
(TURKMENISTAN--PUBLIC HEALTH)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDIKLYCHEV, M.G.; KAZIMOV, G.A.

Some data on the treatment of nephritis in Bayram-Ali Sanatorium; history of the disease over a 10 year period. Zdrav. Turk. 5 no.3: 31-35 My-Je '61. (MIRA 14:10)

1. Iz fakul'tetskoy (zav. - dotsent Ye. A.Pletnev) i gospital'noy (zav. - dotsent G.K.Khodzhakuliyev) terapevticheskikh klinik Turkmen'skogo gosudarstvennogo meditsinskogo instituta imeni Stalina.

(BAYRAM-ALI--KIDNEYS--DISEASES)

FERDYKLYCHEV, M.G.; KAZIMOV, G.A.

Treatment of kidney diseases in Bayram-kala. Vop. khuz. Tadzhik.
Izdat. fil. kult. 30 no.1+71-74. Dush. '65.

(MIRA 18:8,

I. Fakul'tetskaya (zav.- doksent Ye.A. Pletnev) i V. spital'naya
(zav.- doksent G.K. Khadziakul'yev) terapevtskij, filial
Turkmenskogo meditsinskogo Instituta, Ashkhabad.

MILGORADOVA, Ye.I.; HERDYKULOV, Kh.; KOSTINA, V.P.; KHUDAYBERDYEVA, R.N.

Methods for mass cultivation of chlorella. Uzb. biol. zhur. 7
no.3:38-41 '63. (MIRA 1.6:9)

1. Institut botaniki AN UzSSR.

ZAKHAR'YANTS, I.I.; ZAKIROV, M.Z.; ALEKSEYEVA, L.N.; BERDYKULOV, Kh.A.

Photosynthesis of some dominant plant species in the southwestern Kyzyl Kum, Bot. zhur. 49 no.11:1571-1583 N 1964.

1. Institut botaniki AN Uzbekskoy SSR, Tashkent.

(MIRA 18:1)

MILOGRAIOVA, Ye.N.; BERDYKULOV Kh.A.; KOSTINA, V.P.; KHUDAYBERDYYEVA, R.N.

Large-scale cultivation of Chlorella. Uzb. biol. zhur. 8 no.5:
63-66 '64 (MIRA 18:2)

1. Institut botaniki AN UzSSR.

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9

BOKHOT, M.P.; BERDIMURATOV, O.; SADIKOV, N.A.

Chemical and mineralogical composition and some properties
of phosphorites of the Kara-Kalpak A.S. (U.S.S.R.). AN UkrSSR 21
no. 10:2-45 '64 (BINA 19.1)

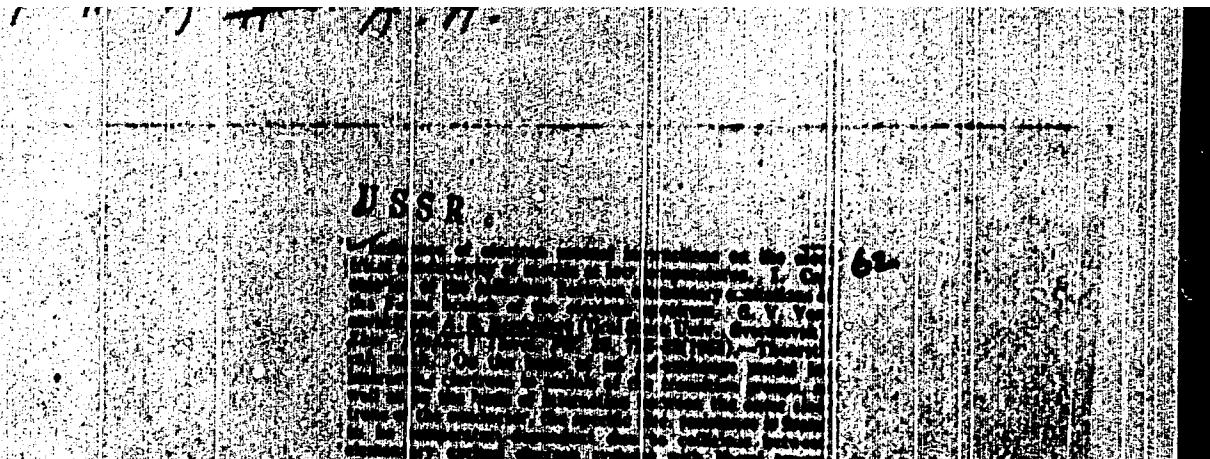
1. Institut geologii i geofiziki iroq. Karagandy AM GNSR.
Submitted January 10, 1964.

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

"APPROVED FOR RELEASE: 03/13/2001

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"APPROVED FOR RELEASE: 03/13/2001

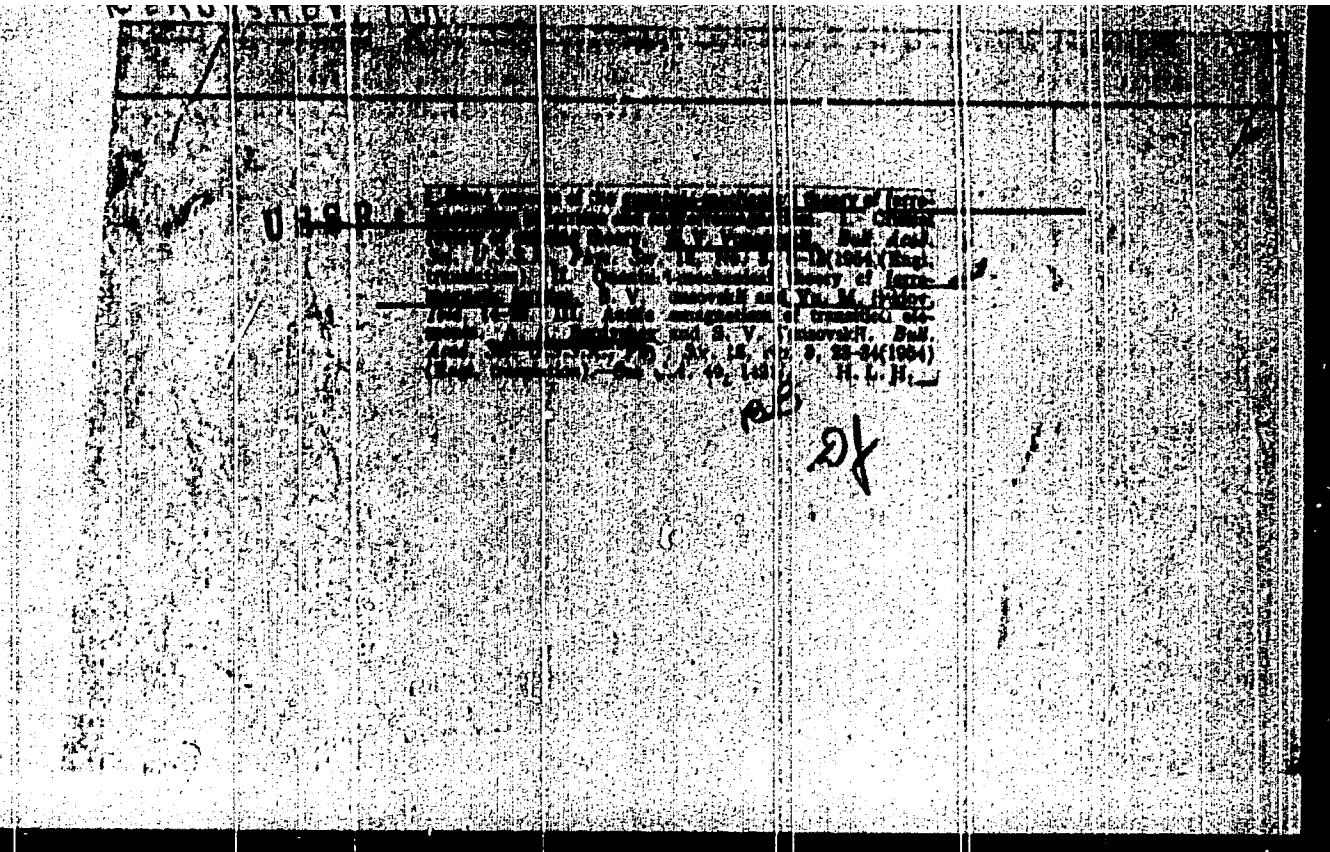
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CIA-RDP86-00513R000200030007-9



APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000200030007-9"

BERDYSHEV, A. A.

"Electrical Conductivity and Magnetic Properties of Transitional Metals."
Cand Phys-Math Sci, Ural State University A. M. Gor'kiy, Sverdlovsk, 1954. (KL,
No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher
Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

AUTHORS: Berdyshev, A. A. and Izyumov, Yu. A. 126-5-3-24/31

TITLE: The Exchange Model for Transition Metals (K s-d-obmennoy modeli perekhodnykh metallov)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol 5, Nr 3, pp 552-3 (USSR)

ABSTRACT: In the s-d model the atom is assumed to have several (z) d-electrons, of which the energy operator is the first equation in the paper. The spontaneous magnetization M is related to M_d , defined by Eq.(1), where b and c are constants defined in Ref.(4) (and not in the paper). If α is large, M varies exponentially with T (s-d exchange). If $\alpha \ll 1$ the exact form of the law will depend on the value assigned to b , which may be 10^{-14} — 10^{-15} erg. The Euler-Maclaurin summation is then applied to give M_d in series form; the extra linear term this introduces then gives somewhat better agreement with experiment.

Card 1/1 than a simple $T^{3/2}$ law. The paper contains 5 equations, (only one numbered).

There are 10 references, 7 of which are Soviet, 3 English.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo
(Ural State University imeni A.M. Gor'kogo)

SUBMITTED: April 11, 1957

1. Metals--Electron transitions 2. Mathematics

SOV/126-6-5-26/43

AUTHORS: Yeremeyeva, G., and Berdyshev, A.

TITLE: Collective Electron Model of Anti-Ferromagnetism of Transition Metals (Antiferromagnetizm perekhodnykh metallov po modeli kollektivizirovannykh elektronov)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 5,
pp 929-930 (USSR)

ABSTRACT: Lidiard (Ref 1) applied the collective electron model to explain antiferromagnetism of transition metals. He assumed the d-band to be in the form of a parabola. In some cases the parabolic form is not a good approximation to the real band. The present authors assume a rectangular band suggested by Wohlfarth (Ref 2). i.e. they assume

$$\psi(\epsilon) = \epsilon_0 N/2,$$

where N is the number of electrons and ϵ_0 is the Fermi energy. Magnetization $\{$ of sub-lattices in the absence of an external field is now given by Eq.(2a). The authors' expression yielded better agreement than Lid-iard's results (Ref 1) with the experimental data of Shull and Wilkinson (Ref 4) on the relative intensity of

Card1/2

SOV/126-6-5-26/43
Collective Electron Model of Anti-Ferromagnetism of Transition Metals

the antiferromagnetic superlattice neutron diffraction lines, which are proportional to ξ^2 . Paramagnetic susceptibilities χ_{\parallel} and χ_{\perp} were also calculated. Heat capacity was found to have a discontinuity at the Neel temperature. This discontinuity was greater by two orders of magnitude than that obtained by Lidiard (Ref 1). The problem of this discontinuity cannot yet be settled by an appeal to experiment, since empirical results are contradictory (Refs 1,7). Comparison of the expressions obtained by the authors with those of Lidiard shows that the form of the d-band is of little importance in the temperature dependence of antiferromagnetic order and in paramagnetic susceptibility but it gives different results for heat capacity. There are 8 English references.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo
(Ural State University imeni A. M. Gor'kiy)

SUBMITTED: June 26, 1957

Card 2/2

24(3)

SOV/139-59-1-10/34

AUTHOR: Berdyshev, A.A.

TITLE: On the Difference between Ferromagnetic and Paramagnetic Curie Points in Ferro- and Antiferromagnetics (O razlichii ferromagnitnoy i paramagnitnoy tochek kyuri v ferro- i antiferromagnetikakh)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, 1959, Nr 1, pp 63-66 (USSR)

ABSTRACT: The ferromagnetic Curie point Θ_c is defined as the temperature at which the spontaneous magnetization of a ferromagnetic disappears. The antiferromagnetic Néel point Θ_N is defined as a temperature at which the antiferromagnetic order disappears. Finally, the paramagnetic point Θ_p is defined as the temperature which enters into the Curie-Weiss law for the permeability of ferro- and antiferromagnetics above the Curie and Néel points respectively. Calculations of the paramagnetic Curie point for ferro- and antiferromagnetics in the Bloch-Heisenberg exchange model lead to the result that $\Theta_p = \Theta_c$ (Ref 1). In order to explain the observed difference between Θ_p and Θ_c it was suggested (Ref 1) that it is necessary to consider not only interactions between nearest neighbours but also higher order

Card 1/3

SOV/139-59-1-10/34

On the Difference between Ferromagnetic and Paramagnetic Curie
Points in Ferro- and Antiferromagnetics

approximations as well as spin order effects. In the case of ferrites and non-magnetic antiferromagnetics this approach is sufficient to explain the above discrepancy. However, in the case of metals this explanation requires a modification. The reason is that in the case of metals and alloys conduction electrons which screen electron interactions play an important role (Ref. 1). The present authors suggest possible explanations of the difference between the ferromagnetic (antiferromagnetic) and paramagnetic Curie points in metals. In the case of transition metals it is necessary to take into account two groups of interacting electrons, namely, the inner d-electrons and the outer s-electrons. For simplicity, only one d- and one s-electron per atom is considered. The d-electrons are considered as localized near the lattice sites and for them only exchange processes are allowed, while the s-electrons are assumed to be free. This is the so-called s-d exchange model, first suggested by Vonskovskiy et al. (Ref. 4). Using this model formulae Card 2/3 are derived for Θ_F , Θ_N and Θ_S , and it is shown that in

SOV/139-59-i-10/34
On the Difference between Ferromagnetic and Paramagnetic Curie Points in Ferro- and Antiferromagnetics

Ferromagnetics $\Theta_p > \Theta_c$ while in antiferromagnetics $|\Theta_p| < \Theta_N$. It is concluded that the existence of a weak s-d exchange interaction in transition metals may explain the existence of the difference between the ferromagnetic (antiferromagnetic) and paramagnetic Curie points in transition metals.

Card 3/3 There are 1 table and 13 references, of which 7 are Soviet and 6 are English.

ASSOCIATION: Ural'skiy Gosuniversitet imeni A.M. Gor'kogo
(Ural State University imeni A.M. Gor'kiy)

SUBMITTED: April 2nd, 1958

SOV/126-7-1-3/28

AUTHORS: Berdyshev, A. A. and Shitikova, K. V.

TITLE: On the Theory of Antiferromagnetism of Transition Metals.
I. Energy Spectrum (K teorii antiferromagnitizma
perekhodnykh metallov. I. Spektr energii)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1959, Vol 7, Nr 1,
pp 21-28 (USSR)

ABSTRACT: At present there is no satisfactory theory of anti-
ferromagnetism of transition metals. Lidiard (Ref.6) and
Matsubara (Ref.8) used Slater's ideas of alternating
potential in an antiferromagnetic. Heber (Ref.9) and
Kasuya (Ref.10) employed Zener's new mechanism of
ferromagnetic and antiferromagnetic binding in transition
metals. Both these theories provoked serious objections
(Ref.11). The present authors suggest an s-d exchange
model of an antiferromagnetic transition metal, similar
to that used for ferromagnetics (Ref.12). A system
consisting of N ions, N "internal" d-electrons and
N conduction s-electrons, is considered. The present
Card 1/2 paper (Part I) deals with the energy spectrum. It is

SCV/126-7-1-3/28
On the Theory of Antiferromagnetism of Transition Metals. I

shown that the conduction band in an antiferromagnetic transition metal is split into two sub-bands with a gap between them proportional to the magnetisation of the d-electron magnetic sub-lattice. The paper is entirely theoretical. Acknowledgment is made to Yu.P. Irkhin for his advice. There are 18 references, of which 4 are Soviet, 11 English, 2 Japanese and 1 German.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet imeni A.M. Gor'kogo (Ural State University imeni A.M. Gor'kogo).

SUBMITTED: April 25, 1957.

Card 2/2

.24(3), 24(5)

AUTHCRS: Seidov, Yu. and Berdyshev, A. SOV/126-7-2-25/39

TITLE: Electron-Spin Relaxation in an Antiferromagnetic
(Spin-elektronnaya relaksatsiya v antiferromagnete)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1959, Vol 7, Nr 2,
pp 298-299 (USSR)

ABSTRACT: The occurrence of thermal equilibrium in a system of spin waves in an antiferromagnetic metal may be due to various factors such as interaction with phonons collisions of spin waves with each other, interaction with conduction electrons etc. The first two mechanisms were considered by Tsukernik (Ref 1). The present authors have considered the third mechanism. The calculation is based on the s-d exchange model (Refs 2 and 3). The energy operator

$$H = \text{const} - \frac{1}{2} \sum_{n_1 \sigma_1} J(\vec{n}_1, \vec{n}_2) a_{n_1 \sigma_1}^+ a_{n_1 \sigma_1} a_{n_2 \sigma_2}^+ a_{n_2 \sigma_2} a_{n_2 \sigma_1} - \\ \text{Card } 1/4 - \frac{1}{N} \sum_{n k_1 k_2} \exp i(\vec{k}_2 - \vec{k}_1) \vec{n} I(\vec{k}_1 \vec{k}_2) a_{n \sigma_1}^+ a_{n \sigma_1} a_{n \sigma_2}^+ a_{k_1 \sigma_2} a_{k_2 \sigma_1}$$

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is transformed using Ziman's formalism (Ref 4). The notation is the same as in Ref 3. For the d-electrons the usual spectrum of spin wave energies is obtained while for the s-electrons the splitting of the conduction band has already been described earlier (Ref 3). The part of the energy operator which contains triple terms in the second quantisation operators and which describes quantum transitions due to the interaction of spin waves with conduction electrons leads to the following equation for the mean frequency of electron-spin relaxation

$$\omega_{c-e} = \left(\sum_{\mu} n_{\mu} \right)^{-1} \sum_{\mu k_1 k_2} |I(k_1, k_2)|^2 E_{\mu}^{-1} \left[\left(A_{\mu} + \sqrt{A_{\mu}^2 - E_{\mu}^2} \right) \delta(\vec{k}_2 - \vec{k}_1 + \vec{\mu}) - \left(E_{\mu} + \sqrt{A_{\mu}^2 - E_{\mu}^2} \right) \delta(\vec{k}_2 - \vec{k}_1 + \vec{\mu} + \vec{w}) \exp(E_{k_2}/kT) n_{k_1} n_{k_2} \delta(E_{k_2} - E_{k_1} - E_{\mu}) \right]$$

where

Card 2/4. $n_{\mu} = (\exp(E_{\mu}/kT) - 1)^{-1}$; $n_k = (\exp(E_k - \frac{1}{2}E_{\mu})/kT + 1)^{-1}$; $I(k_1, k_2) =$

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is the exchange integral for a conduction electron and a d-electron, \vec{w} is the reciprocal lattice vector, E_k is the energy of a spin wave, and E_k is the energy of a conduction electron. The remaining symbols have the same meaning as in Ref 4. Calculations of W_{c-e} were carried out in the same approximation as in the corresponding ferromagnetic problem (Ref 2). It turned out that

$$W_{c-e} \approx \frac{I}{2\pi^2} \cdot \frac{J^2 k_0^2}{hA kT} = \frac{1}{2\pi^2} \frac{k\theta_N^2 I_0^2}{hz_A^2 T}, \quad \theta_N = \frac{zJ}{k}$$

where I_0 is the s-d exchange integral inside one atom, J is the exchange integral between the d-shells of neighbouring atoms, ξ is the Fermi surface energy, A is the transport integral for a conduction electron in a one electron theory, θ_N is the Neel point, and z is the number of nearest neighbours. In a rough estimate of W_{c-e} , one may take $A \sim 10^{-13}$ erg, $I_0 \sim 10^{-14}$ erg Card 3/4 (Ref 2), $\theta_N \sim 100^\circ K$ and $\xi \sim 10^{-12}$ erg. It follows